



Physics



Super Curriculum

Hinchingbrooke Sixth Form

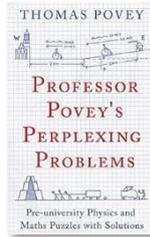
Excellence in Everything



Physics

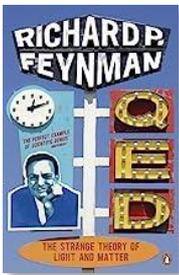
Reading

Professor Povey perplexing problem
by Thomas Povey



Thomas Povey has provided in this book enough super-curricular content to keep an aspiring mathematician, physicist, engineer or material scientist and their teachers happy for months. *[University of Oxford]*

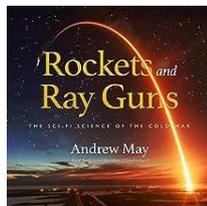
QED
by Richard Feynman



Quantum electrodynamics is the theory that explains how light and electrons interact, and in doing so illuminates the deepest and most complex mysteries of the world around us. Thanks to Richard Feynman and his colleagues, it is also one of the rare parts of physics that is known for sure - a theory that has stood the test

of time. These entertaining lectures use clear everyday examples to provide the definitive introduction to QED.

Rockets and Ray Guns: The SCFI of the Cold War
by Andrew May



This entertaining book, offering a plethora of little-known facts and insights from previously classified military projects, shows how the real-world science of the Cold War followed in the footsteps of science fiction – and how the two together changed our perception of both science and scientists, and paved the way to the world we live in today.

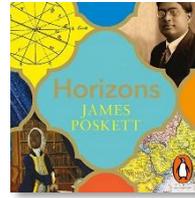
The order of time
by Carlo Rovelli



Time is a mystery that does not cease to puzzle us. Philosophers, artists and poets have long explored its meaning while scientists have found that its structure is different from the simple intuition we have of it. Bringing together science, philosophy and art, Carlo Rovelli unravels this mystery. This book shows

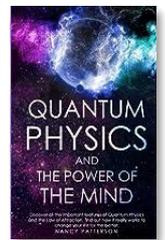
that to understand ourselves we need to reflect on time - and to understand time we need to reflect on ourselves.

Horizons: A Global History of Science
by James Posnett



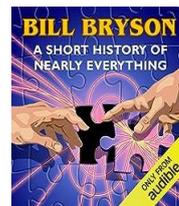
We are told that modern science was invented in Europe, the product of great minds like Copernicus, Newton, Darwin and Einstein. But this is wrong. Science is not, and has never been, a uniquely European endeavour. This book is a major retelling of the history of science from 1450 to the present day that explodes the myth that science began in Europe - instead celebrating how scientists from Africa, America, Asia and the Pacific were integral to this very human story.

Quantum Physics and the Power of the Mind
by Nancy Patterson



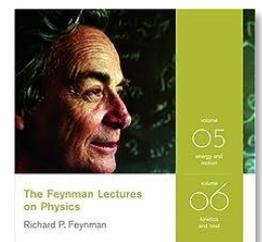
Quantum physics is an integral part of our lives and it is extremely important for us to have at least the basic knowledge on the subject. Most people struggle with it as there are scarcely any books on the topic that is compatible with the needs and demands of people who are just starting out as physicists and need a simple guide to understand the concepts.

A Short History of Nearly Everything
by Bill Bryson



Bill Bryson describes himself as a reluctant traveller: but even when he stays safely in his own study at home, he can't contain his curiosity about the world around him. This book is his quest to find out everything that has happened from the Big Bang to the rise of civilization - how we got from there to here.

The Feynman Lectures on Physics
by Richard Feynman



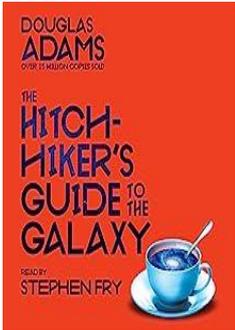
This is a physics textbook based on some lectures by Richard Feynman, a Nobel laureate who has sometimes been called "The Great Explainer". The lectures were presented before undergraduate students at the California Institute of Technology (Caltech), during 1961–1963. This book is perhaps the most popular physics book ever written.



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Hitchhikers Guide to the Galaxy

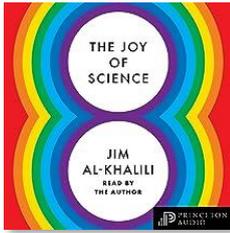
by Douglas Adams



This is the first book in the highly popular series of comic science fiction novels by British writer Douglas Adams. The saga mocks modern society with humour and cynicism and has as its hero a hapless, deeply ordinary Englishman (Arthur Dent) who unexpectedly finds himself adrift in a universe characterised by randomness and absurdity.

The Joy of Science

by Jim Al Khalili



Today's world is unpredictable and full of contradictions, and navigating its complexities while trying to make the best decisions is far from easy. *The Joy of Science* presents 8

short lessons on how to unlock the clarity, empowerment, and joy of thinking and living a little more scientifically.



Physics

Writing Tasks

Oxford Science Writing Competition

Enter the annual [Oxford Science Writing Competition](#) from Oxford University.

Write an Article

Write an article on the subject of your choice for publication in the Sixth Form Magazine.



Physics

Listening Tasks

Podcasts

[Imaginary Worlds](#) sounds like what would happen if NPR went to ComicCon and decided that's all they ever wanted to cover. Host Eric Molinsky spent over a decade working as a public radio reporter and producer, and he uses those skills to create thoughtful, sound-rich episodes about science fiction, fantasy, and other genres of speculative fiction. Every other week, he talks with comic book artists, game designers, novelists, screenwriters, filmmakers, and fans about how they craft their worlds, why we suspend our disbelief, and what happens if the spell is broken. Imaginary worlds may be set on distant planets or parallel dimensions, but they are crafted here on Earth, and they're always about us and our lived experiences.

[Point of Discovery](#) looks behind every scientific discovery is a scientist (or 12) and a story. "Point of Discovery" takes you on a journey beyond WHAT we know to HOW we know it. Along the way, listeners will meet the sometimes quirky, always passionate people whose curiosity unlocks hidden worlds.

[Physics World](#) is a regular podcast series. [Physics World Weekly](#) looks at the latest events and headlines in physics, as well as featuring short interviews with scientists and a team of journalists. [Physics World Stories](#) takes a more in-depth look at a topic that we feel warrants further coverage.



Physics

Research Tasks

Summer School and Work Experience

Research [Imperial College](#) summer schools and work experience opportunities.



Watching Tasks

NASA TV

Watch launches and online coverage of the news at [NASA](#)

Erin Brockovich

A film based on a true story. Erin was never trained, or indeed meant to work in a lawyers office. She discovers some legal files that don't add up.

On investigation she discovers an injustice, and decides, against the odds, to take on the bad guys on behalf of a poor and very ill community in a small town.



Trips and Visits

Royal Observatory

Visit the [Royal Observatory](#), Greenwich, London.

Christmas Lectures

Sign up for the [Royal Institution Christmas Lectures](#) in London.



Physics

Student Led Tasks

Institute of Physics

Join the [Institute of Physics](#) and take a look at their physics resources for A-level.

Becoming a Medic

Interested in [Becoming A Medic](#)? Take a look at this website for info on volunteering and exams.